इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 11555-2 (1986): Designer's data sheet, Part 2: Column internal [MED 17: Chemical Engineering Plants and Related Equipment]

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

UDC 66·011 (083·22) ; 66·048·37

IS : 11555 (Part 2) - 1986

Indian Standard

(Reaffirmed 2003)

DESIGNER'S DATA SHEET

PART 2 COLUMN INTERNAL

1. Scope — Covers the technical data to be supplied by the designer of the distillation column internals to the fabricator for the fabrication of the distillation column as per the design.

2. Designer's Data Sheet

DESIGNER'S DATA SHEET FOR DISTILLATION COLUMN INTERNALS

1. Client/purchaser	
2. Project	
3. Column No.	
4. Service	
INPUT DATA	
5. Tower diameter	mm
6. Tray spacing	mm
7. Operating pressure	MPa
8. Operating temperature	K
9. Design temperature	K
10. Total No. of trays/Theoretical stages	
11. Tray type or type of packings and internal	
12. Maximum pressure drop across the column	mm hot liquid
13. Vapour-liquid loading information	
14. *Vapour*	
Flow rate	kg/h
Density	kg/m^3
Molecular weight	
Temperature	K
Compressibility factor	
15. *Liquid*	
Flow rate	kg/h
Density	kg/m^3
Viscosity	cP/cST
Surface tension	Dynes/cm
Molecular weight	
Temperature	K
Heat duty (if it is heat transfer section)	

(*Continued*)

Chemical Engineering Sectional Committee, EDC 57; Basic Chemical Engineering Standards Subcommittee, EDC 57 : 1 [Ref : Doc : EDC 57 (4341)]

Adopted 1 January 1986

© November 1986, ISI

Gr 2

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

DESIGNER'S DATA SHEET FOR DISTILLATION COLUMN INTERNALS — *Contd*

FOAMING CHARACTERISTICS

16. *Material of construction*
    Trays
    Internal
    Valves
    Cap
    Packings

17. *Total Corrosion Allowance*
    Tray
    Internal

18. Adjustable weir required Yes/No

19. Preferred exit weir height mm

Note — The above information is needed at each section of the column where there is change in vapour-liquid loading.

20. *Internal Manways in Trays*
    a) Size
    b) Removable from top/bottom

OUTPUT DATA

21. Hardware specification

21.1 If contacting device is tray
Type of tray
Type of flow and passes
No. of trays
Inside diameter mm
Tray spacing mm
If bubble cap : No./Tray Size
Pitch Riser diameter Gauge
If sieve or valve : No./Tray Size/Type
Diameter Pitch
Tray thickness

Inlet weirs : Height above tray floor

Outlet weirs : Length
a) Fixed weir height above tray floor
b) Weir adjustable from to above tray floor
c) Weir set above tray floor
Downcomer clearance above tray floor
Recessed seal pan, if required; depth mm
Seal pan distance below bottom tray mm

Process sketch a) Bubble cap drawing
b) Tray layout drawing
c) Tower tolerances standard

(*Continued*)

DESIGNER'S DATA SHEET FOR DISTILLATION COLUMN INTERNALS — *Contd*

21.1.1 *Material of construction*

a) *Bubble cap and riser*
Gaskets, bolts, nuts and washers

b) *Trays deck*
Gaskets, bolting, clamping, tray supports, downcomers and seal pan

21.2 *If contacting device is packings*

Packing type

a) Size, type, thickness and bulk density	
b) Height of packing sections	
c) Method of packing	wet/dry
d) Packing arrangement	random/stacked
e) Type of distributor tray	
f) Type of packing support	
g) Bed limiters/holdown plates	
h) Spray nozzle specification if used	

Spray Nozzle Specification

	Bank No.	No.	Size	Type	Manufacturer
Spray Nozzles					

21.2.1 *Material of construction*

Packing, distribution tray, redistributor tray, packing support, gaskets, spray nozzles and support rings.

22. *Attachments*

a) Liquid draw off box design
b) Chimney tray design
c) Vapour return nozzle design
d) Transaction arrangements

23. *Hydraulic Performance Data*

23.1 *Tray design*

Tray location
Jet flood (percent)
Downcomer flood (percent)
Wet tray pressure drop (kPa)
Operating range (percent of design loads)

23.2 *Packed column*

Packed section location
Size and type of packing
Flooding (percent)
Pressure drop per m of bed
Design of distributor.
Operating range (percentage of design load)

EXPLANATORY NOTE

This data sheet will enable the fabricator to fabricate the internals of the column as per the design of the designer.

This Indian Standard is being issued in two parts, Part 1 covers mechanical design of columns and Part 2 column internals.

Printed at Swatantra Bharat Press, Delhi, India